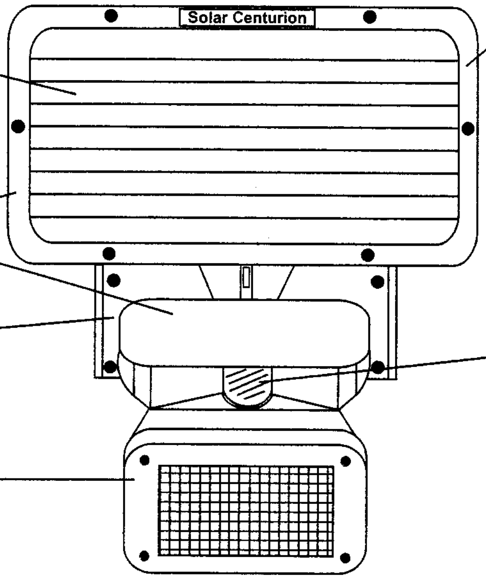
SUN-MATE®

Model No. 223

Solar Centurion

User's Manual

Solar Powered Outdoor Security Light



6"x 12" solar panel utilizes the sun's free energy to keep the Solar Centurion charged for nighttime illumination

12 feet of connecting wire included allows the solar panel to be detached for strategic placement under the sun

Weatherproof ABS construction

Sealed lead-acid battery included

Passive infrared motion sensor covers up to 110°

600 Lumens bright halogen bulb included

WARNING !

Before installing this product, charge the battery using AC/DC adaptor included in this package for 10 hrs.

Hours Of Expected Sunlight Needed To Charge The Solar Centurion

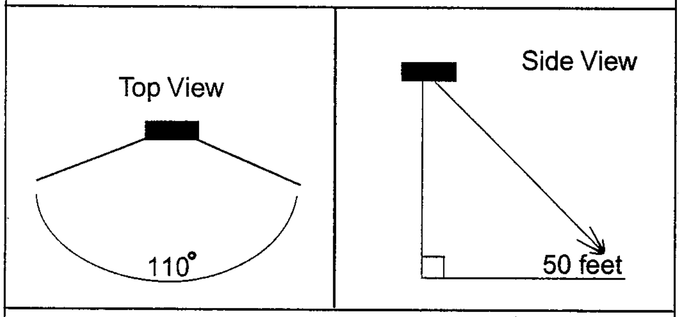
On any given day the charging time will depend on how clear or cloudy the sky is on that particular day, whether or not the solar panel is exposed to direct sunlight, and in what geographic region it is used. To fully charge the Solar Centurion from a totally empty battery, approximately 15 hours of direct sunlight is needed.

Number of trips on full charge :

TIME SETTING	#OF TRIPS
.5 min.	60
1 min.	30
1.5 min.	20

NOTE : If the object that initated the trip does not move out of the Solar Centurion range, the centurion will stay ON beyond the time setting.

DETECTION AREA



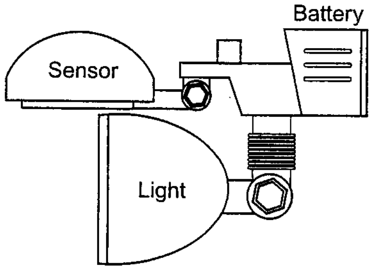
- The Solar Centurion infrared Motion Detector gives you 110° of protection, covers an open area up to 50 feet and can be mounted on a swivel base that can be rotated and tilted on any direction.
- The bright halogen light can be rotated and tilted in any direction

PACKAGE CONTENTS

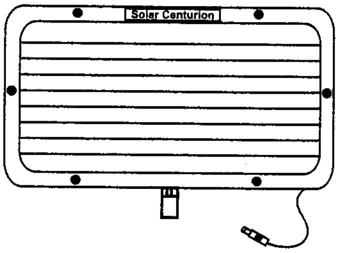
1. Solar Centurion complete with a passive infrared motion sensor, a sealed 6 volt rechargeable battery and a 600 candle power halogen lamp.
2. One piece of 6" x 12" solar panel with 12 feet power plug wire.
3. One AC/DC adaptor with 12 Volts DC, 500mA output and 120V~60Hz input.
4. Four pieces 4x25KA screws for wall mounting or wooden stake mounting.
5. Six pieces 3.0x30PA screws for wall mounting or wooden surface mounting.
6. Four pieces plastic spacers for wall mounting.
7. One 3.0x20PM screws for mounting the solar panel on the battery case.

Please check the following parts :

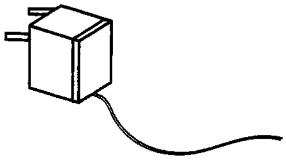
①Centurion Light



②Solar Panel

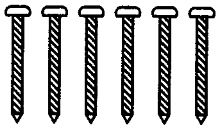


③30 feet AC/DC adaptor
Input 120 volts 60Hz
Output 12V DC 500mA

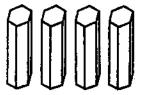


④Screw 4.0x25KA
(4 pieces)

⑤Screw 3.0x30PA
(6 pieces)

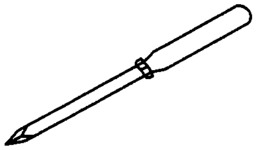


⑥Plastic Spacer
(4 pieces)

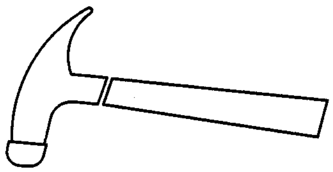


⑦Screw 3.0x20PM
(1 piece)

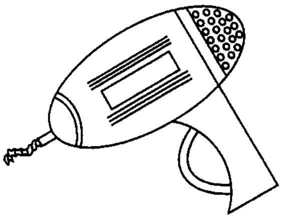
Before operating, You will need :



ⒶPhilips screw driver



ⒷHammer



ⒸDrill Machine

OPERATING INSTRUCTION

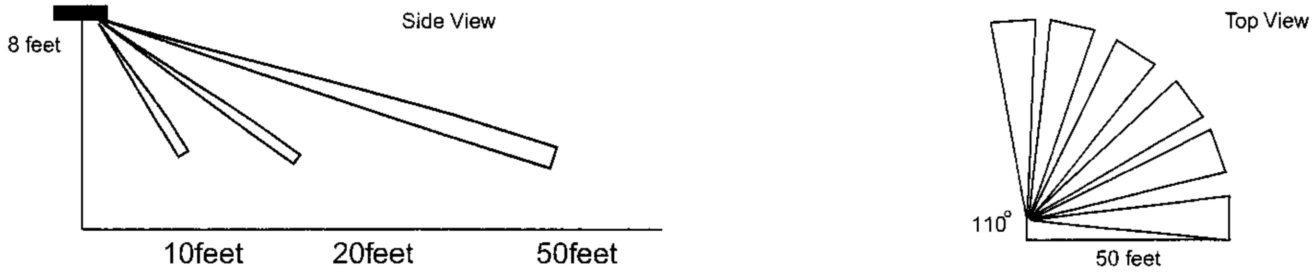
Solar Centurion , the solar powered security light is the perfect security system for your home and business. The infrared sensor will detect heat and motion within its sensing zone up 50 feet and gives you up to 100 deg of protection. Upon detection, the sensor automatically activates the lighting system to instantly illuminate the area. It can be adjusted to keep the light for 0.5 min, 1.0 min, and 1.5 min. after motion is no longer detected in the coverage area. Built-In solar cell automatically disables day light operation to conserve energy. Solar Centurion requires NO DANGEROUS ELECTRICAL WIRING.

Mounting Location

For best results, install Solar Centurion on an area that can receive good sunlight for recharging. If this is not possible, the solar panel can be moved and placed remotely using the 12 feet power plug wire supplied (please see section for remote mounting installation). Select a mounting location for the security light based on the coverage angels shown in figure 1 and 2..

Coverage Area

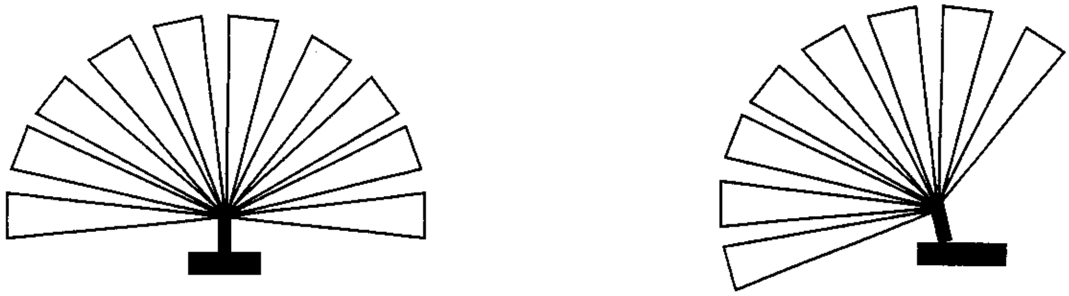
(Figure 1)



The sensor is most sensitive to movements across its detection zone and least sensitive to movements directly towards the sensor as shown in figure 2.

Motion Sensitivity

(Figure 2)



BETTER SENSITIVITY

GOOD SENSITIVITY

- Avoid aiming the sensor at objects that may change temperature rapidly.
- Do not locate the sensor over heating and cooling units.
- Do not aim the sensor at reflective surfaces such as windows, swimming pool and others. These may reflect heat that interferes with the unit's operation.
- For ideal operation and maximum coverage, the unit should be mounted 8 feet above the ground. Mounting the unit below or above 8 feet would vary the coverage angle.

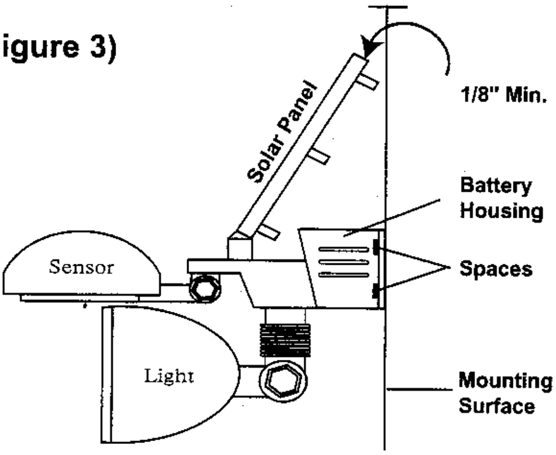
INSTALLATION

A Wall Mounting or Wooden Surface Mounting

The Solar Centurion is designed to be easily mounted on most flat surfaces. For surfaces that may require some adjustment use the spacers which are included to adjust positioning as required

1. Place the solar panel in post. DO NOT tighten screw at this time.
2. Take unit with panel and carefully align the SOLAR CENTURION to the anticipated mounting area.
3. There should be at least an 1/8" space between the solar panel and the surface where you want to attach the unit. If additional space is required or your surface is uneven, place the spacers provided behind the unit (see Figure 3)
4. Before fastening, remove the solar panel and then fasten the unit permanently with the four 4.0x25KA mounting screws provided.
5. Unwrap enough cable from the rear of the solar panel so that it can easily be plugged to the solar panel female plug.
6. Place panel in the post and tighten the 3.0x20PM screw to fasten panel securely.

(Figure 3)



B Remote Solar Panel

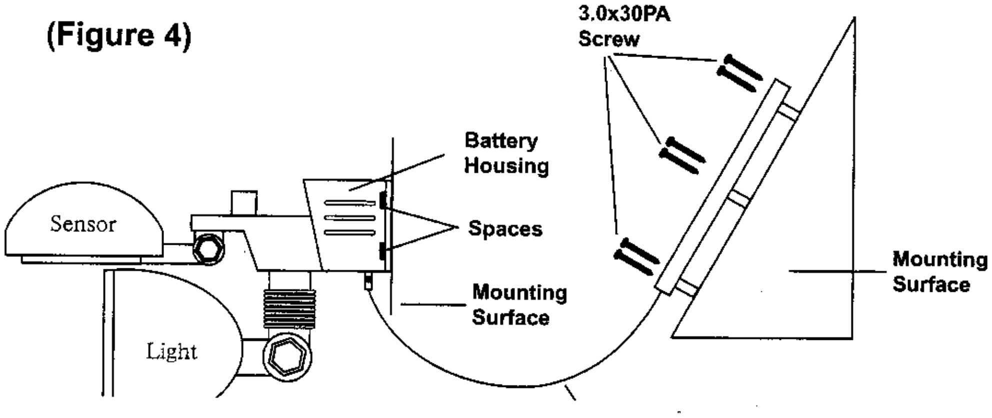
In the event that the Solar centurion mounting does not allow the noon-time sun to directly face the panel to gather optimal energy, the panel may be removed and mounted either horizontally or vertically (See Figure 4)

1. There is approximately 12 feet of cable stored behind the panel. Unwrap enough cable from the rear of the solar panel so that it can be plugged to the solar panel female plug.

2. Place panel at desired location and using the four or six 3.0x30PA screws provided, mount the panel by inserting one or more screws on each side of the panel in the holes provided. CAUTION : When tightening screws make sure the panel is leveled and not twisted, so as not to crack the solar glass.

3. Plug cable from solar panel to the solar panel female plug located at the bottom of the unit.

(Figure 4)



SIREN

Turn the siren switch to ON or OFF position to turn on or off siren.
Siren operates along with the light with the same duration of time.

ADJUSTMENT

Motion Sensor Adjustment

1. On the bottom of the motion sensor head is a small switch with adjustable "OFF", "TEST", .5 min, 1 min, and 1.5min, move the switch to the "TEST" position. This disables the light sensing cell (which keeps the solar centurion off during the daylight hours) and enables you to adjust or position the motion sensor head during the day.
2. Aim the sensor towards the area in which you wish to detect intrusion (again please note that the sensor is most sensitive to movement across the detection zone). The Solar Centurion motion sensor head will typically "see" a 120 degree pattern. Its practical range for detecting people is up to 50 feet. The coverage area can be adjusted simply by tilting the sensor head up or down. Make sure the unit is aimed below the horizon or damage may occur from direct sunlight.
3. With the switch still in the "TEST position have a person move into the coverage area that you have designated. Mark the spot where you trigger the light, then walk out of the area, wait a few seconds for the actual coverage area. The light will go on and stay on for a few seconds or until there is no further movement in the area, adjust the sensor to obtain desired coverage.
4. Once you have completed your adjustments for sensor positioning, flip the switch at the bottom of the sensor from the "TEST" position to the desired lighting time duration it should now be properly set for dust-to-dawn operation.

Timing Adjustment

The duration of the time that the light remains ON after the motion stops is adjustable for .5 min, 1.0 min or 1.5 min. Select the light duration to suit your needs. if there is continuous motion taking place within the sensing zone, the light will remain ON up to 1/2 hour or until the motion has stopped.

IMPORTANT

Before installing your Solar Centurion, turn the time adjustment to the "off" position and use the AC/DC adaptor to charge the battery for 10 hrs. This is necessary as batteries discharge overtime and there is no way of knowing at what level of performance the battery has upon your purchase. This procedure will allow the battery to operate at its peak capacity. The Solar Centurion is now ready to perform all night long every night giving your security and convenience lighting.

Operating Tips and Procedures

If your Solar Centurion does not function property, read the above operating instructions, read the note at the end of this booklet, then take the following steps :-

1. Examine the Solar Centurion to make sure that the solar panel is not broken. If so, please refer to warranty.
2. Make sure that the sensor head is positioned such that no other light is shining on it after dark, it must be in darkness at night, or the Solar Centurion will "think" that it is still daytime and will not illuminate.
3. Make sure that the Solar Centurion solar panel is located where is receives several hours of bright sunshine every day, with the flat face of the solar panel facing the noon-time sun and the plug from panel to unit is connected.
4. The unit is designed to circulate air and drain water, check and make sure drain holes around the unit and the solar panel are not clogged.

- Do not attempt to repair or disassemble unit. this may permanently damage the system.
- Do not locate sensor head close to a heat source such as a dryer vent or lamp. Sudden temperature changed could turn the light on.
- Flask triggering can occur from rapid temperature change and/or direct contact by rain or snow striking the lens and cuing the light to go to when it is not need.

- If light keeps turning On and Off : The sensor head may be affected by heat emitted from the Solar Centurion lamp or by temperature change from a nearby source. Try changing the sensor head position. The sensor head may be sensing the movement of automobiles on a nearby street, people walking on sidewalks, or pets and other small animals. Try re-aiming or repositioning the sensor head, or adjust its coverage area by taping over a portion of the lens with weather resistant tape. Black electrical tape may also be used.

Conditions which may cause lower sensitivity :

- On very foggy nights sensitivity may be less due to moisture collection on the lens
- On very hot days sensitivity may be less since high ambient temperature may be close to body temperature making the unit appear to be less sensitive.
- On very cold days when heavy clothing is used, especially covering the facial area where, very little heat will be emitted from the unit appear less sensitive.
- Sensitivity is greater when walking across sensor head compared to walking directly towards it.
- There is a few seconds delay (where motion is ignored) after light goes out to prevent false triggering.

Storage

If unit is stored for an extended length of time indoors, disconnect battery leads.

Cleaning

Wipe with damp cloth only. Soaps or polishes may damage the sensor lens.

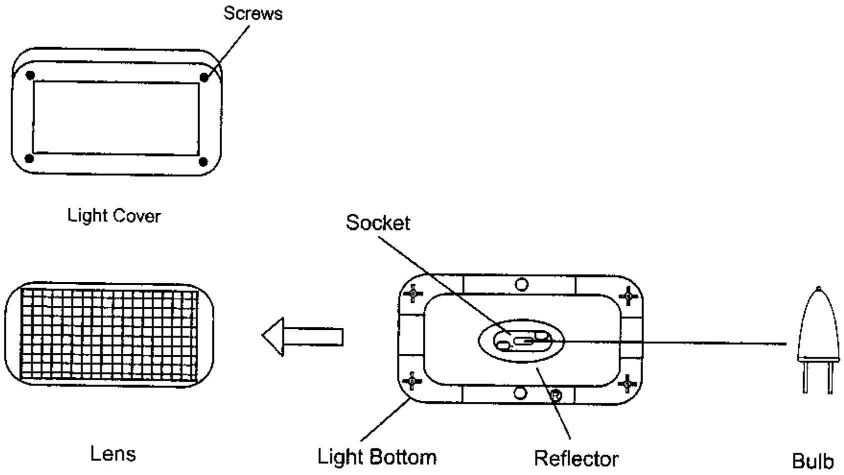
REPLACING THE BATTERY AND BULB

The rechargeable sealed lead-acid 6 volt battery built in your Solar Centurion is designed to last for years. The bulb is available at many hardware or lighting stores. Specifications as shown below.

To Replace The Bulb

Warning : Unit should be off and cool before replacing bulb

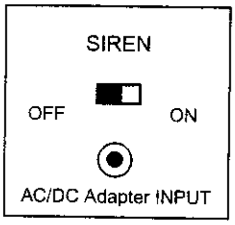
1. Remove six (6) screws on bulb head. Remove the cover and the lens gently.
2. Make sure the bulb is cool and pull bulb vertically out of its socket.
3. Using a soft cloth, insert new bulb into socket and snap in (DO NOT touch new bulb with fingers as the oil from your skin will damage bulb).
4. Be sure that the bulb is tightly inserted in the socket. Place the lens, cover and tighten the six screw with Philips screw driver.

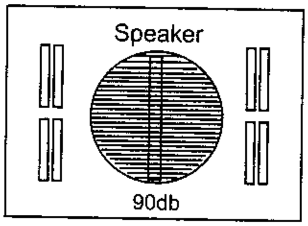


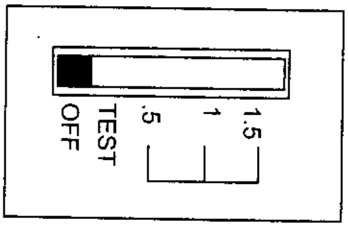
Specification of the bulb :

Voltage : 6V
Ampere : 2.5A
Watt : 15W
Diameter : 8mm
Length : 30 mm
Base : G4
Lumen : 220lm
Average Life : 3000 hours

SIREN Operation :







Use the switch marked on/off to turn on the siren when desired. The siren will sound when your unit is activated (triggered by the motion sensor). The siren will sound at the same time that the light will be turned on. If you do not wish the siren to turn on, leave the switch to the "OFF" position.

Adjustment of length of sound

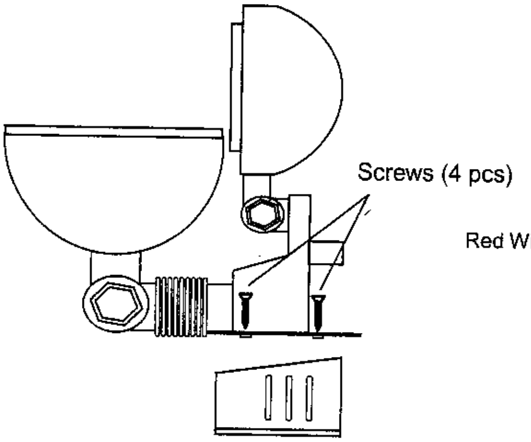
The siren sound operates along with the light at the same time. You can select from .5 min, 1 min and 1.5 min (see illustration).While in "TEST" position, the siren will turn on (you will hear the sound). It is best to keep the unit in a clean and dry area.

Dust, dirt and moisture can effect the level of sound coming from the speaker.

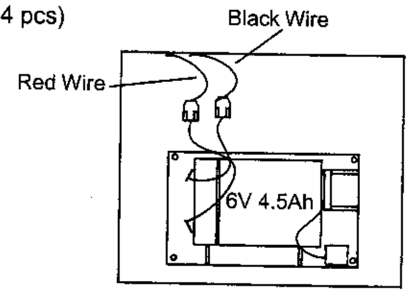
To replace the battery

1. Remove unit from its mounting surface (see figure 5).
2. Lay on table and remove the four (4) screws from the battery housing.
3. Gently lift away cover from the battery housing to expose battery inside.
4. Remove battery from housing and disconnect the lugs from terminals.
5. When reconnecting new battery, the "RED" should go to the plus (+) terminal and the "BLACK" to the minus (-) terminal.
6. Place the cover and tighten the 4 screws.

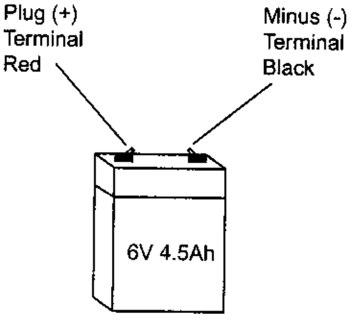
CAUTION : Disconnection of the terminals will damage the unit.



Battery Case



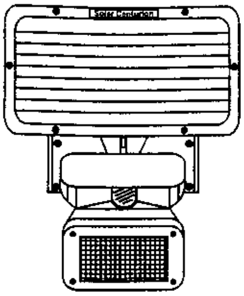
Old Battery



New Battery

USING AC-DC Adaptor

- When using the adaptor, it is not necessary to turn off Solar Centurion while charging.
- When Solar Centurion does not respond to the motion even after the solar panel has been exposed to sunlight, recharge battery for 10 hrs using AC-DC adaptor.
- When using the adaptor, it is not necessary to unplug the solar panel.



Sun-Mate Corp.®
Solar Powered
Outdoor Security Light
Model No. 223

PLEASE PRINT CLEARLY. This will be your mailing label.

Name : ______________________________

Address : ______________________________

City : ______________ **State :** ______________ **Zip :** ______________

Telephone : (   ) ______________________________

QTY.	DESCRIPTION	AMOUNT	TOTAL
____	110 Volt AC/DC Adapter (UL approved)	$ 7.95	______
____	Sealed Lead-Acid Rechargeable Battery (6V, 4Ah)	$ 9.95	______
____	Bulb (6 Voltage, 15 Watt)	$ 5.00	______

Sub-Total	______
California Residents Add 8.25% Sales Tax	______
Add $9.00 for S/H (UPS Ground) per order (Max. 1 pc each)	______
International Deliveries - Add $25.00	______
TOTAL	______

Payment is belong made with :-

☐ Check (#_______) ☐ Money Order ☐ Visa ☐ Master Card ☐ American Express ☐ Discover

☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐

Expiration Date : ________________ Signature : ______________________________

MAIL COMPLETED FORM (along with payment) TO :
SUN-MATE CORP. - SALES DEPT.
8421 Canoga Ave., Canoga Park, CA 91304 U.S.A.

LIMITED WARRANTY

If this product is proven defective in workmanship or material during the 30-day period from the date of original purchase at retail, the same maybe replaced by either the Seller or SUN-MATE CORPORATION. SUCH REPLACEMENT SHALL BE THE SOLE REMEDY OF THE CONSUMER, AND THERE SHALL BE NO LIABILITY ON THE PART OF THE MANUFACTURER, DISTRIBUTOR, OR SELLER FOR ANY LOSS OR DAMAGE, DIRECT OR CONSEQUENTIAL ARISING OUT OF THE USE OF OR INABILITY TO USE THIS PRODUCT.

Some states of the United States do not allow the exclusion of incidental or consequential damages, so the above exclusion may not apply to you. This warranty gives you specific legal rights and you may also have other rights, which vary from state to state in the United States, Puerto Rico or from province to province, in Canada. In the United States, contact: **Sun-Mate®** Corp, Consumer Relations Dept. 8421 Canoga Avenue, Canoga Park, CA91304

WARRANTY REGISTRATION CARD

Item Purchased:______________________________ Date :__________

Location Purchased:____

Name: ____

Address:____

City: ________________________State:__________Zip:____________

Email:____

Comments: ____

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CUT OUT AND MAIL TO:

SUN-MATE® CORP.
Consumer Relations Dept.
8421 Canoga Avenue
Canoga Park, CA 91304 USA